

Received January 3, 1766.

VIII. *A Letter from Edward Wortley Montagu, Esquire, F. R. S. to William Watson, M. D. F. R. S. containing an Account of his Journey from Cairo, in Egypt, to the Written Mountains, in the Defart of Sinai.*

S I R,

Read March 13, 1766. **I**T is with a good deal of difficulty that I have prevailed upon myself to write to you, for, as coming now to Italy was quite unforeseen, and I am immediately going back to the East, I have not my journal with me, but luckily have the famous inscriptions. I am sensible every paper I send to the Royal Society exposes more and more my incapacity. However, as these inscriptions are much wanted, I cannot avoid sending them. I shall only speak to some of the points the bishop of Clogher mentions; but cannot avoid being now and then a little prolix.

I set out from Cairo, by the road known by the name of Tauriche Beni Israel, Road of the Children of Israel. After twenty hours travelling, at about three miles an hour, we passed, by an opening in the mountains on our right hand, the mountains Maxattee. There are two more roads, one to the northward of this, which the Mecca pilgrims go, and one to the south,

south, between the mountains, but never travelled (as it does not lead to Suez, to which it is thirty hours march from Cairo). Through this breach the children of Israel are said to have entered the mountains, and not to have taken the most southern road, which I think most probable: for those valleys, to judge by what one now sees, could not be passable for Pharaoh's chariots. This breach, the inhabitants told me, leads directly to a plain called Badeah, which in Arabic signifies something *new* and *extraordinary*, and also *the beginning*, as the beginning of every thing is new, *i. e.* was not before known.

At Suez I found an opportunity of going to Tor by sea, which I gladly embraced, that, by going nearer the place, at which the Israelites are supposed to have entered the gulf, and having a view from the sea, as well of that as of the opposite shore, I might be a little better able to form a judgment about it. Besides, I was willing to have the views, bearings, and soundings, which I took, and they will appear some time or other; but this paper would scarce be their place, if I had them with me.

When we were opposite to Badeah, it seemed to me (for I was not on shore) a plain, capable of containing the Israelites, with a small elevation in the middle of it. I saw something too like ruins. The captain and pilots told me, that this was the place, where the Israelites entered the sea, and the ruins were those of a convent (I suppose built on the spot in commemoration of the fact); they added that there was good water there. There is here a strong current, which sets to the opposite shore, about south east; it forms

by its strength a whirlpool, where sailors said ships were lost, if forced into it, for want of wind, by the current. This pool is about six miles northward of Cape Karondel; and just below this pool there is a sand, a flat island at low water, which runs east and west about three miles. This sand, I suppose, is thrown up by the force of the current; and the same current, by the resistance it meets with from this bank, being forced back into the cavity made by this excavation, forms the whirlpool. This pool is called Birque Pharaone, the well, or pool of Pharaoh; and here they affirm his host was destroyed. I shall say more of this as I travel back by land. We came to an anchor in fifteen fathom water, within a mile and a half of the shore, to the southward of this sand, and in the Birque Karondel, to the northward of the cape; here the eastern shore is already mountainous, which, near this place, was a sandy beach: the Egyptian shore, from Suez to Badeah, is likewise rocky and steep; so no entering upon the gulf from that shore, but at Badeah or Suez.

It is high water always, when the moon is at her meridian height, and it ebbs six hours. At Suez, it flows six foot; the spring tides are nine, and in the variable months, from the beginning of November, to the end of April, sometimes twelve. From the beginning of May to the beginning of October, a northerly wind generally rises, and goes down with the sun; it is often very strong. This wind never fails in these months, unless there be some violent storm; the rest of the year the winds are variable, and when they blow hard at S. and S. S. E. these winds set up the sea through the narrow streight of Babel Mandel, and up this gulf through its mouth,
between

between Gebel El Zait, on the west side of this sea, and the southermost point of the bay of Tor, on the east side of this western branch of this sea, where it is not above twelve or fourteen miles over. I suppose such a wind, hindering the water from going out, causes this extraordinary encrease in the spring tides. We see the same thing happen with the same winds at Venice, both golfs running nearly in the same direction.

The Egyptian, western, or Thebaic shore, from Badeah southward to opposite Tor, on the eastern shore, is all mountainous, and steep; and at Elim, the northermost point of the bay of Tor, ends the ridge of mountains, which begin on the eastern shore of this western branch at Karondel. I say nothing of Elim, or Tor, or the marine productions of this golf, as this paper is intended to give an account of Sharne, Meenah El Dzahab, Kadefh Barnea, the stone which Moses struck twice, and the inscriptions. I, however, must say, that, from this place, mount Sinai, properly called, cannot be seen; but only the ridge or groupe of mountains, in which it is, and which altogether form that part of this tongue of land called in general Mount Sinai. The garden of the Monks of Mount Sinai at Elim renders in dates, &c. 20,000 piaftres per ann. or £ 2.500.

We from thence crossed the plain, in about eight hours, and entered the mountains of Sinai. They are of granite of different colours. At the entrance of the narrow breach, through which we passed, I saw, on a large loose granite stone, an inscription in unknown characters, given, I think, by Dr. Pocock, bishop of Offory; however, as the Israelites had no writing, that we know of, when they passed here, I did not think it of consequence enough to stop for;

the Arabs told me, it was relative to a battle fought here between Arabs, and indeed I do not see what point of history it can illustrate; besides, there are not above five or six words. We arrived at the convent of Mount Sinai, after the usual difficulties mentioned by other travellers, were received as usual, and saw the usual places, of which, however, I shall give the plans as well as elevations, which I took. I must say, that the Monks were far from owing to me, that they had ever meddled with the print of the foot of Mahomet's camel. I examined it narrowly, and no chissel has absolutely ever touched it, for the coat of the granite is entire and unbroke in every part; and every body knows, that if the coat of less hard stones than granite is once destroyed, it never returns. It is a most curious *Lusus Naturæ*, and the Mahometans turn it to their use.

Meribah is indeed surprizingly striking. I examined the lips of its mouths, and found that no chissel had ever worked there; the channel is plainly worn by only the course of water, and the bare inspection of it is sufficient to convince any one it is not the work of man. Amongst the innumerable cracks in rocks, which I have seen in this, as well as other parts of the world, I never met with any like this, except that at Jerusalem, and the two, which are in the rock Moses struck twice, of which hereafter.

I had enquired of the captain and the two pilots of our ship, about Sharme and Dzahab, on the western shore of the eastern branch of the Red-sea; they told me that they were often forced up the Elanitic golf, the eastern branch of the Red-sea, and generally went to
Sharme,

Sharme, and sometimes as high as Dzahab ; that they generally ran from Cape Mahomet, the southermost part of the peninsula between those two golfs, to Sharme, in six hours, because they always made as much more way, as they commonly do, they very seldom going there but in a storm : they generally run four knots, so this makes forty eight miles, which brings it to the northward of Tor. Tor is in lat. 27. 55. Cape Mahomet thirty miles southward, lat. 27. 25. Sharme forty eight miles nearly N. lat. 28. 13. consequently about E. N. E. of Sinai. The port is pretty large, surrounded with high mountains, the entrance very narrow, and the water deep quite to the rocks, which are so very steep, that a stone dropt from the summit falls into the basin. No wind can be felt here ; they don't cast anchor, but fasten their cables to the rocks. There is good water ; some habitations are found on the sides of the mountains, and a pretty large village at top : this seems to answer the idea of Nest-Ken. Dzahab lies as high again up the golf, so forty eight miles more, or in lat. 29. This port is considerably larger than the former, and very good, but not so closely surrounded with mountains ; it is however, very safe. There is a well of great antiquity with very good water ; very considerable ruins are found, and they say, there was a great city formerly ; but no habitations now, except an Arabian camp of 2000 men. There is a road from it to Jerusalem, formerly much frequented. Thus far the captain and pilots. I enquired from the Monks, as well as Arabs, about these places, as well as about the ruins, supposed by my learned friend, the bishop of Ofsory, to be Kadesh Barnea : the former could only tell me, they had not received any fish from
thence

thence in many years, that it was two easy days journey off, but the road was mountainous; so one may suppose the distance less than forty miles. The Arabs agreed as to the road; but they said, it was once a large place, where their prince lived, whose daughter Moses married, that Moses was afterwards their prince, and the greatest of all prophets. These Arabs place Moses the first, Salomon the second, Mahomet the third, Christ the fourth, and then the prophets of the Bible. As to Dzahab, the Monks only knew the distance to be four days journey, and that there was a road from it to Jerusalem: the Arabs told me the same, so the distance is about eighty miles. I enquired of them all about the ruins; they told me there were very considerable ones about half way to Dzahab, about forty miles from Sinai; but I should think Kadesh must have been much nearer to Jerusalem. I would willingly have gone to these places; but as the four clans of Arabs, which inhabit this promontory, were then at war one with the other, I could get no conductor. In another journey I hope to be more lucky, for this is all hearsay; however, combining the whole together, and comparing it with what we collect from Scripture, I think we may well conclude, Sharme to be Midian, and Meenah El Dzahab to be Eziongeber: what the interjacent ruins are I cannot conjecture; but I believe I have found Kadesh Barnea to be elsewhere. I think it cannot be here, for the Israelites were on the borders of the Holy Land, or Land of Promise, when they were ordered back; and when they were stopped by the Moabites, they are said to have been brought up from Kadesh Barnea; and I meet with no place in
sacred

sacred writing, or any antient geographer, neither Strabo nor any other, that draw the line of division between this promontory and the Land of Promise so low down; nor could they do it, as these ruins are within almost seventy miles of the extremity of it. There are two roads from Mount Sinai to Jerusalem, the one through Pharan, the other by the way of Dzahab: that through Pharan is eleven days journey; two to Pharan, three to a station of the Mecca Pilgrims called Scheich Ali, one and an half to some considerable ruins; all this to the northward: from thence four and something more to Jerusalem, by way of Hebron, leaving the Asphaltic Lake on the right hand to the south-eastward. The other way is longer, on account of the road being more mountainous; that too passes the same ruins, and also Scheich Ali. I enquired about this, when I was at Jerusalem, and received the very same account, with this addition, that such Mahometans, as went from Jerusalem to Mecca, went that way, to join the Cairo caravan at Scheich Ali. This seems to be a situation opposite to Kadesh Barnea; at the line drawn by all the geographers; it is without Mount Sinai (taken for this whole tract); and just before the Moabites, as the children of Israel passed by Mount Hor, now Acaba, leaving the Asphaltic Lake on their left hand, to the northwest. The tradition too of the Arabs is, that they passed this way; therefore, I think, Kadesh Barnea must be near this spot. There are here considerable ruins; and I know of no city that ever was here, for Petra lay more to the east, between the Asphaltic lake and the Elanitic golf. To leave no enquiry wanting, I asked the Rabbins of Jerusalem, where they placed Kadesh Barnea; and they said, these ruins.

We set out from Mount Sinai by the way of Scheich Salem; and, after we had passed Mahomet's stone, came to the beautiful valley, mentioned in the Journal. I lay there (and hope I have discovered the manna, but that will be the subject of another paper) and did not set out before day-light, that I might not pass the rock which Moses struck twice. I searched, and enquired of my Arabs, but could neither hear nor see any thing of it. I saw several short inscriptions stained on some parts of the mountains, the characters being the same with those on mount Sinai, Meribah, &c. given by the bishop of Offory. About four miles before we arrived at Pharan, we passed through a remarkable breach in a rock; each side of it is perpendicular as a wall, about eighty feet high, and the breach is about forty broad. It is at this breach, I imagine, the Horites were smote, four miles beyond the present ruins of Pharan; for having passed this breach they could make a stand, nor could they well be pursued. Here, on the tops of the mountains to our right hand, were ruins of buildings, and one seemed a castle. From Meribah to near this place, we had always rather descended; in most places there is the bed of a stream and after rain the water runs; but a little before we came to this breach, it winded off towards the west, for the waters fall into that part of the desert we crossed from Tor. Between this breach and Pharan, there are several springs, and one at Pharan where we encamped; there is the bed of the river mentioned by the Journal, the traditional account of which agrees with what is said by St. Paul. Waters seem to have run from Meribah to within about six miles of this place; the bed of a stream is here again very plain and a spring at the
upper

upper end of it, which does not yield water enough to make a stream, the bed then is dry; four valleys terminate here, and form a large area. I enquired about the road to Jerusalem; the people agreed in the distance and ruins. We travelled in the bed of the river through the valley to the north; and in about half an hour, the sight and appearance of a large stone, not unlike Meribah, which lay at some distance from the mountain on our right hand, struck me; and I also observed, it had many small stones upon it. The Arabs, when they have any stone or spot in veneration, as Mahomet's stone, and the like, after their devotion, lay some smooth stone upon it. I asked what it was, they told me Hagar Moufa, the stone of Moses. I told them that could not be, for that lay in Rephidim; they said that was true, but this was Hagar il Chotatain, the stone of the two strokes; that he struck it twice, and more water came from it than from Meribah; witness the river. The bed of the river winds to the eastward, about E. S. E. I asked how far it went; they said this bed ran by Sheich Ali to those ruins, and quite away to the sea; so the river must have begun here, and not at Pharan, and the bed from Pharan here is only formed (I suppose) by winter torrents. If this is the bed of the river mentioned by St. Paul, as I dare say it is, we have the second rock: if it runs to the ruins, as is said, and there is no reason to doubt it, they will be pretty plainly those of Kadesh Barnea; and if this bed continues in the same course to the sea, as it probably does, this probably is the river at Rinocolura, supposed, by Eratosthenes, to be formed by the Arabian lakes; because he did not know its miraculous

head. This river is doubted of by Strabo, because dried up to the source, from the time the Israelites entered the Land of Promise, and the tradition was then lost. You may see Strabo's *Affyria*, edit. Casaubon, p. 5. 10. towards the bottom. Pardon this bold conjecture; but it coincides and conciliates sacred history with antient geography. This too seems a proof, that this is really the second struck rock. As to the springs between the breach and Pharan, they certainly did not exist in the time of Moses; or, if they did, they would have been as nothing to so many people.

We went down a large valley to the west, towards the sea, and passed the head of a valley, a part of the desert of Sin, which separates the mountains of Pharan from those which run along the coast, and the same plain, which we had passed from Tor. We had scarce entered these mountains, and travelled an hour, when after passing a mountain, where there were visible marks of an extinguished subterraneous fire, we saw, on our left hand, a small rock, with some unknown characters cut on it, not stained upon it, as those hitherto met with; and, in ten minutes, we entered a valley six miles broad, running nearly North and South, with all the rocks, which enclose it on the West side, covered with characters. These are what are called *Gebel El Macaatab*, the written mountains. On examining these characters, I was greatly disappointed, in finding them every where interspersed with figures of men and beasts, which convinced me they were not written by the Israelites; for if they had been after the publication of the law, Moses would not have permitted them to engrave images, so immediately
I
after

small cross שלב שך ישוע, by changing the *shin* into *sin*, and adding *je*, it would be an Arabic word سجين a cross, and might be explained, the cross borne or carried by Jesus. The Hebrew would be Jesus brought safety, or salvation. But, Sir, more able than me will judge better. These are all conjectures; and it seems much easier to say what these inscriptions are not, than what they are. They can scarce be of St. Helen's time; for they would have some analogy with Greek characters, and they have none. Perhaps some gentlemen will think them antient Egyptian, written, by the colony, which they suppose went to inhabit China. That is a matter I won't meddle with; but, amongst many others, it will be liable to one great objection, which is, that such colony, if there ever was one, probably went the straight road, from the head of one golf to the head of the other, from Hierapolis to Eloth, the way the Mecca pilgrims now go. This place would have been far out of their way, being at least sixty miles to the southward of the pilgrims road, unless they were supposed to have had transports at Dzahab, or Sharme. I, for the first reason given, did not think them written by the Israelites, and could not conceive that they were of any great consequence. I only took these few as a specimen. Here are on other parts of this rock, some Greek, and Arabic, as well as some Saracen inscriptions, and an Hebrew one, which is ושמך אחר. The Saracens and Arabic only say, "such an one was here at such a time"; the same say the Greek ones, except one, which says, as I remember, for I have it not with me, "The evil genius of the army wrote this," which can only prove, that some body of Greeks was worsted here, after the characters were

were written, and that they attributed their defeat to some magick power in these characters: as we are now fruitful in conjecture, perhaps some gentlemen will bring Xenophon here. The characters seem to be of the very same kind with those stained on different parts of Mount Sinai, Meribah, &c. which my learned and accurate friend the Bishop of Ossory has given.

The third day from this place, travelling westward, we encamped at Sarondou, as the Journal calls it; but it is Korondel, where are the bitter waters, Marah. I tried if the branches of any of the trees had any effect on the waters; but found none: so the effect mentioned in Scripture must have been miraculous. These waters at the spring are somewhat bitter and brackish, but as every foot they run over the sand is covered with bituminous salts, grown up by the excessive heat of the sun, they acquire much saltiness, and bitterness, and very soon become not potable. This place, off which the ships cast anchor, is below the sand, which I mentioned before, near the Birque Korondel. After nine hours and a half march we arrived, and encamped at the Desert of Shur, or Sour. The constant tradition is, that the Israelites ascended from the sea here; this is opposite to the plain Badeah, to which the above-mentioned pass in the mountains lead. From this place the openings in the mountains appear a great crack, and may be called a Mouth, taking Hiroth for an appellative. However, I should rather adopt the signification of Liberty. It would hardly have been necessary for the Israelites to pass the sea, if they were within two or three miles of the northern extremity of the gulf; the space of at most two miles, the breadth
of

of the golf at Suez, and at most three foot deep at low water, for it is then constantly waded over, could not have contained so many people, or drowned Pharaoh's army. There would have been little necessity for his cavalry and chariots to precipitate themselves after a number of people on foot, incumbered with their wives, children, and baggage; when they could soon have overtaken them with going so little about. These reasons, added to the significant names of the places, Tauriche Beni Israel, road of the children of Israel; Attacah, Deliverance, Pihahiroth, whether an appellative or significative; Badcah, new thing, or miracle; Bachorel Polsum, sea of destruction; convince me, that the Israelites entered the sea at Badeah, and no where else. Besides, all the rest of the coast from Suez, and below Badcah, is steep rocks, so there must have been another miracle for them to descend: the current too sets from this place where we encamped, toward the opposite shore, into the pool Birque Pharaone, Pool of Pharaoh, where, the tradition is, his host was drowned: a current, formed, I suppose, by the falling and rushing of one watery wall on the other, and driving it down: a current, perhaps, by God permitted to remain ever since, *in memoriam rei*; the distance to the bitter waters is about thirty miles. I omitted to mention in its place, that, between this and Korondel, we were not so lucky as the author of the Journal, who met with a charming rivulet of sweet water; we met with none, good or bad. The Ain Mousa, which the Israelites would have met with, if they had passed at Suez, and the coast from hence southward, about a mile to Tor, being all rock and steep too, induce me to believe, that they entered

ed the sea at Badeah, and ascended from it here, and not at any other place. But I am too sensible of my own inability to decide, and leave that to better judges than I am. I only throw out what occurs to me, from the inspection of the country, an inspection as accurate as I am capable of. If any thing I have said can in the least support that revelation, to which I dare declare myself a friend, even in this enlightened age, I shall be very happy; or if this trip of mine can be of any use whatever, as I had great pleasure in it, I may truly say with Horace—*Omne tulit punctum*, &c.

The denomination of יַם סוּף, I believe, only regards the Hierapolitic branch, as the marine productions, Madrepores, &c. which form admirable forests in the bottom of it, are not in the Elanitic branch, or the gulf; I mean the broad part below Cape Mahomet. No more than that western branch was known to the Israelites at the time of their passage, if it was to the Egyptians: but the name descended to the whole, as their knowledge of it. The Red Sea seems to regard the broad part alone; for tho' there are not the above-mentioned sea productions, yet there is so great a quantity of tube coral (not found in the western branch of the Hierapolitic gulf) and such rocks, as one may say of them, that the Gedda ships fasten themselves to them instead of casting anchor. It is of a deep red, so that possibly, the first navigators entering at the streight of Babel Mandel, from the red they saw, called it the Red Sea, and that name descended to the whole with their navigation. This sea is tempestuous and full of shoals; there is no harbour on the Arabian coast after Tor, except one, I mean between Suez and Gidda or Mecca, which is a day and a half from Gidda:

Gidda. Gidda is its port ; and there is only one on the other coast, Cossire ; but it is a very bad one ; however, ships sometimes go thither, and caravans cross the country to Morshout. The ships are, as the bishop of Ossory has described them ; the helm is on the outside, as I suppose, with his lordship, that of St. Paul was. They make use of but four sails, and no compass, nor do they ever cast the lead. They sail only by day light, from anchoring place to anchoring place and are not, above two days out of sight of land, from Cape Mahomet to the Arabian main : if a gale happen, they are often lost ; about one in ten every year. I shall be glad to be honoured with the Society's command, and in communicating this, you will oblige,

Sir,

Your most humble servant,

Pisa, Dec.
2, 1765.

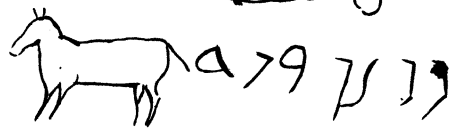
Ed. Wortley Mountagu.

P. S. I am a very bad draughtsman ; but I assure you, the sketches contained in Plate III. are rather better than the originals. They are about six inches long, the marble is whitish, in some places reddish, of a flesh color ; they are engraved with a pointed instrument, for one sees, in the bottom of them, round marks of the point of the instrument. I have met with much basalto, but not one piece of that soft stone of which is the bust at Turin, nor any of the characters upon it, except some are found amongst these, I have neither seen any head, bust, or statue, in the character of that.

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The second rock struck by Moses is, I think, 43 feet long, 16 broad, 13 high; it has two cracks, oblique ones; in them are some mouths, like those of Meribah: it is of a hard stone, not granite or marble.

I have the exact dimensions and elevation of the second stone, as well as of Meribah.

IX. *A Discovery, with Observations, of two new Comets in the Marine Observatory at Paris; by M. Messier, F. R. S. and Member of the Academy of Sciences at Paris; translated from the French, by M. Maty, M. D. Sec. R. S.*

Read March 20, April 24,
and May 15, 1766.

ON the 8th of March 1766, the sky having been clear the whole day, I had a mind to make use of this fine weather to look for the satellite of Venus, which for some years has been talked of. I employed, for this purpose, an excellent Gregorian telescope, of 30 inches focus; the great speculum of which, being six inches diameter, magnified objects about 109 times. I could discover nothing with this instrument, the planet appearing only surrounded with small telescopic stars. I likewise made use of a very good achromatic telescope of 5 feet, constructed at Paris, and belonging to the Pr. of S. with which I discovered at about 7 o'clock, and at some distance of Venus, a nebosity of a small extent,

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